Traffic Induces Skin Aging

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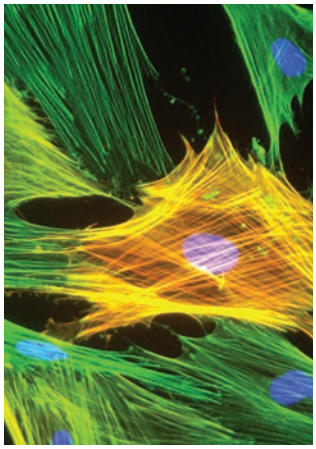
Exposure to ambient particulate matter (PM) adversely affects human health via the generation of oxidative stress, which is a major contributor to extrinsic skin aging. In a study of 400 elderly Caucasian women from the SALIA study cohort, Vierkötter and colleagues compiled epidemiological evidence that traffic-related PM contributes directly to extrinsic skin aging. An increase in soot and particles from traffic and a higher PM_{10} background concentration were significantly associated with more facial pigment spots and more pronounced nasolabial folds. These results support the notion that PM penetrates the skin through hair follicles and negatively impacts skin aging. ***See page 2719***

Jacalin Therapy

Li and colleagues fortuitously discovered that the plant-derived lectin jacalin precipitated the ectodomain of desmoglein-1 (Dsg1), the antigen that invokes production of pathogenic autoantibodies implicated in pemphigus foliaceus (PF). Further investigations revealed that jacalin binds to the epidermis, blocks the binding of PF autoantibodies to Dsg1, and abrogates the pathogenicity of the autoantibodies *in vivo*. Although no toxicity has been observed following administration of jacalin to mice, this lectin may prove toxic because of its agglutinating activities. Nevertheless, these results highlight a potential therapeutic intervention via the disruption of the specific antibody–antigen interaction as an alternative to the current corticosteroid and immunosuppressant treatment regimens. ***See page 2773***

High to Low



Chronic wounds, which occur frequently in diabetic patients, are associated with local ischemia and decreased tissue oxygen. Modarressi and colleagues observed that, under conditions of low oxygen, myofibroblasts, which are critical for normal wound repair, downregulated contraction as well as the expression of α-smooth muscle actin, indicating inhibition of both function and differentiation of these cells. These changes were completely reversible upon reestablishment of high oxygen and upon mechanical stress, offering a promising approach to promote closure of chronic ischemic wounds. The authors therefore concluded that low oxygen is a negative modulator of skin myofibroblast differentiation and function. ***See page 2818***

Protective Variants

Although single-nucleotide polymorphisms (SNPs) in at least eight genes have been associated with psoriasis risk, these variants do not completely account for the genetic contribution to psoriasis. In a large-scale genetic association study of 25,215 SNPs, Li and colleagues discovered that rare alleles of two independent SNPs in the *IFIH1* gene were associated with a decreased risk of psoriasis. The function of IFIH1 as an interferon-induced putative RNA helicase implicated in RNA virus recognition supports a role for these SNPs in psoriasis because viral infection is considered an environmental factor for this disease. ***See page 2768***

Life with Hair Loss

Because the perceived severity of alopecia areata (AA) may differ between patients and health-care providers, assessment of quality of life (QoL) in these patients is important. Dubois and colleagues found that QoL is impaired in AA patients, with self-perception, mental health, and social life being most affected. In addition, social life in AA patients is affected similarly to that in patients with psoriasis, atopic dermatitis, and chronic idiopathic urticaria. These results underscore the importance of understanding the impact of AA and promoting the development of new therapies for this benign hair-loss disease. ***See page 2830***

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